REMARKS

The present amendment is prepared in accordance with the requirements of 37 C.F.R. § 1.121. A complete listing of all the claims in the application is shown above showing the status of each claim. For current amendments, inserted material is underlined and deleted material has a line there-through.

The present amendment is being filed concurrently with a Request for Continued Examination under 37 CFR 1.114 of the subject patent application.

Claims 1, 9, 11, 14, and 20 have been amended. Support for the new amendments can be found in the specification at pg. 4, l. 29 to pg. 5; l. 4, pg. 8, ll. 4-6; pg. 13, ll. 8-10; pg. 14, ll. 2-8; pg. 16, ll. 1-4; pg. 19, l. 2 to pg. 20, l. 8.

No new matter has been added.

In the foregoing Preliminary Amendment, the claims of the present application have been amended to clarify that the microbiological interception enhancing agent of the invention is immobilized within and resides throughout the present integrated paper. In particular, independent claims 1, 14 and 20 are all directed to integrated papers that include fibrillated fibers and active agents both immobilized within such integrated papers. An essential feature of the invention, as is claimed, is that these integrated papers also include a microbiological interception enhancing agent that is immobilized within and resides throughout the integrated paper. This is supported in the specification, since, prior to forming the integrated paper using the fibers and/or active agents, the fibers and/or active agents are treated with the microbiological interception enhancing agent so that the

colloidal metal precipitate resides on portion thereof. It is these treated fibers and active agents that are then used to form the present integrated paper, whereby the fibers and active agents are immobilized within the integrated paper, and as such, so is the colloidal metal precipitate of the present microbiological interception enhancing agent.

While the current claims have process limitations, it is submitted that the claims are directed to the integrated papers themselves, and that the process limitations are incorporated to merely define the product that applicants regard as the invention. *In re Luck*, 476 F.2d 650, 177 USPQ 523 (CCPA 1973); *In re Pilkington*, 411 F.2d 1345, 162 USPQ 145 (CCPA 1969); *In re Steppan*, 394 F.2d 1013, 156 USPQ 143 (CCPA 1967) (A product-by-process claim, which is a product claim that defines the claimed product in terms of the process by which it is made, is proper.) It is clear from a reading of the claims that the present claims are directed to integrated papers, not the process of making such papers. See, MPEP Sec. 2173.05(p) (A claim to a device, apparatus, manufacture, or composition of matter may contain a reference to the process in which it is intended to be used without being objectionable under 35 USC 112, second paragraph, so long as it is clear that the claim is directed to the product and not the process.)

As for the prior art rejections, applicants continue to submit that neither Giglia et al. (U.S. 4,929,502), Sawan et al. U.S. 5,817,325 ("Sawan '325") nor Sawan et al., US Patent No. 5,681,468 ("Sawan '468"), alone or in combination, disclose the invention as is currently claimed.

The Examiner has recognized that Giglia does not teach or suggest a microbial interception enhancing agent on selected fibers. As such, it is submitted that Giglia does not, and cannot, teach or suggest a microbial interception enhancing agent on selected fibers residing within and throughout an integrated paper, as is currently claimed.

The above Sawan patents do not overcome this deficiency.

Sawan '468 discloses a liquid dispenser that has a filter which has been coated with a uniform thickness on at least one surface, and also at least partially coated within a plurality of its pores, with a metallic material, e.g., a metal or metal oxide or metal salt, that is bacteriostatic or bacteriocidal. (Abstract and col. 2, ll. 11-15 and 54-67; Col. 9, ll. 44-52, and *See*, Examples 2-5 and 10.) In order to achieve this coating, Sawan '468 requires pretreatment of the filter with either a carbonyl compound (see, col. 4, ll. 7-17 and col. 9, ll. 10-42) or an activator (see, col. 4, ll. 18-24 and col. 10, ll. 15-27.)

The filter of Sawan '468 is coated with a carbonyl compound (e.g., an aldehyde such as glutaraldehyde, a sugar such as glucose, or an aldehyde functionality generating compound) or with an activator (e.g., tin, titanium, vanadium, chromium, manganese, iron, etc.), followed by contact with a metal salt and an amine-containing compound solution. (Col. 4, ll. 7-24, col. 9, ll. 10-16 and col. 10, ll. 15-27 and Example 12 at col. 15, ll. 13-34.) That is, the metal salt and the amine-containing compound are in the same solution, and the carbonyl-coated filter is contacted with this solution. Examples 6A and 6B of Sawan '468 teach that concentrated ammonium hydroxide (i.e., an amine-containing compound (col. 10,

ll. 9-14)) is added to a silver nitrate/sodium hydroxide solution to form a soluble metal amine complex in solution. (Col. 12, l. 58 – col. 12, l. 15.) This solution is used to treat the membranes of examples 2-5 and 10. (See, col. 11, l. 40 to col. 14, l 60.) According to Sawan '468, the carbonyl compound reduces the metal ion to metal so as to deposit the metal on the filter surface and within pores of the filter. (Col. 9, ll. 10-52.) Sawan '468 further discloses that its metal coating preferably has a uniform metal coating thickness on the surface and within the pores of the filter. (Col. 9, ll. 44-52.)

Sawan '325 also discloses coatings of an organic material which forms a matrix and a biocidal material intercalated in the matrix to form a contact-killing coating on a substrate or to make freestanding antimicrobial films (not attached to a substrate). (Col. 4, ll. 9-32.) The compositions of Sawan '325 are applied to various substrates to form antimicrobial coatings or layers on the substrates, whereby the solution, dispersion or suspension of Sawan '325 is applied to a substrate to form the matrix. (Col. 4, ll. 33-41 and col. 8, ll. 41-43.) The solution, dispersion or suspension is applied to the substrate by any suitable means for applying a liquid coating, and then dried to form the matrix. (Col. 4, ll. 56-67.) The matrix is then contacted with the biocidal material to deposit the biocidal material into the matrix. (Col. 5, ll. 3-7 and col. 9, ll. 44-46.) Alternatively, the organic material and the biocidal material may be combined in solution and then applied to the substrate to form the matrix. (Col. 5, ll. 8-20 and col. 9, ll. 44-46.) As another embodiment, a freestanding antimicrobial film may be formed using the antimicrobial material of Sawan '325. (Col. 5, ll. 37-59 and col. 8, ll. 41-43.)

That is, like that of Sawan '468, Sawan '325 is limited to coatings or layers using the coating formulations disclosed therein on a wide range of materials, whereby the coating or layer is applied directly to the surfaces. (Col. 11, ll. 14-19.) This is exemplified in the examples of Sawan '325 (See, Col. 14, l. 4 to col. 18, ll. 67.) Neither Sawan '468 nor Sawan '325 disclose, contemplate or suggest an integrated paper made papers that include fibrillated fibers, active agents and a microbiological interception enhancing agent all immobilized within and residing throughout an integrated paper as is currently claimed.

In view of the foregoing, applicant submits that the structures of the present invention are different from that of the cited references, such that, the cited references, either alone or in any proper combination thereof do not anticipate nor render obvious the present invention.

In the light of the amendments to the claims it is believed that the present RCE application is in condition for allowance which action is respectfully solicited.

Respectfully submitted,

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